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July 14, 2005

Ms. Mary L. Cottrell
Secretary
Dept. of Telecommunications & Energy
One South Station
Boston, MA 02110

Re: Docket No. DTE 04-116 - Investigation into Quality of Service Provided by LDC's

Dear Ms. Cottrell:

This letter provides the response to requests for the information listed below.

Response to DTE-02 Interrogatories dated 05/27/2005
DTE-A - 001

Response to DTE-04 Interrogatories dated 07/01/2005
DTE-LDC - 001 , 002 , 003 , 004 , 005 , 006

Very truly yours,

Stephen Klionsky

SK/tms
cc: Service List

Western Massachusetts Electric Company
Docket No. DTE 04-116

Information Request DTE-02
Dated: 05/27/2005
Q- DTE-A-001
Page 1 of 1

Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

Would it be appropriate in the future for companies to enter into settlements or other agreements which would permit parties to deviate from the established SQ Guidelines? Explain.

Response:

The Department should not preclude companies from proposing a settlement to the Department on service quality or any other matter. A settlement that includes service quality issues may be part of a package with other important issues that the Department would very much like to see settled. The Department should have the opportunity to review a settlement in its totality, as it does now, and make a determination as to whether the benefits warrant its approval. If the Department does not deem a settlement or other agreement to meet appropriate standards, the Department can always reject the settlement. There is no need to preclude parties from submitting service quality proposals to the Department.

Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

Do the current system wide SQ measures permit pockets of poor performance in terms of SAIDI, SAIFI, and CAIDI? If so, explain how such poor performing pockets can be identified, reduced, and eliminated.

Response:

The current method of measuring system wide service quality measures of SAIDI, SAIFI, and CAIDI provides a measurement of how the distribution system is performing on average. As such, there will always be circuits with better and worse than average performance. The present system does not necessarily permit pockets of poor performance. The performance of the circuits with less than average, or much less than the average performance, weight the average in the penalty provisions of the service quality plan, thus affecting the overall system performance. All circuits cannot be expected to perform to the same level due a variety of circumstances such as urban, suburban, or rural circuits, environmental factors, and the causes of outages. Due to the fact that some circuits consist of 50-100+ miles of OH wire, many outages do not impact the same customers. WMECO monitors circuit segments that experience multiple interruptions and takes appropriate steps. Currently, the Department receives information on the poorer performing circuits by two separate means; in the list of the 10% worst circuits, and monthly in the list of significant outages provided to the Department. Additionally, during periodic meetings held with the Department, WMECO discusses problem areas of the distribution system and the steps taken to improve these areas.

Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

Is it feasible for the current SQ measures SAIDI, SAIFI, and CAIDI to be at circuit level instead of at a system-wide level. Will this capture pockets of poor performance? If so, please describe:

- (a) how can such change be undertaken; and
- (b) what would be the advantage and disadvantage to the customers and to the distribution companies?

Response:

As discussed in WMECO's answer to Information Request DTE- 03, Q-DTE- LDC-003, previously filed with the Department on June 9, 2005, WMECO continues to support the use of system-wide reliability measures of SAIDI, SAIFI, and CAIDI instead of individual circuit level measures. Please refer to WMECO's answer to that question for a discussion of the disadvantages of utilizing such a method. Pockets of poor performing circuits are identified in the list of the 10% Worst Circuits list currently being provided to the Department in WMECO's annual SQI Filing. Although the metrics can be measured at the circuit level, they do not accurately identify where capital dollars should be invested in order to improve reliability. The adoption of circuit level metrics as a standardized means of measuring service quality would not provide meaningful management information due to the variability of circuit terrain and density as well as weather events that have the largest influence on these metrics. Managing to individual circuit level metrics will drive the system reliability down if costs of improvements and benefits are not balanced.

Western Massachusetts Electric Company
Docket No. DTE 04-116

Information Request DTE-04
Dated: 07/01/2005
Q- DTE-LDC-003
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Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

If the answer to DTE LDC 4-2 is no, please provide an alternative to that captures poorly performing circuits.

Response:

WMECO supports the current system as a means of measuring and penalizing for performance at the circuit level. WMECO believes it adequately identifies the poorly performing circuits by careful monitoring of individual circuits looking for trends in performance. WMECO believes its present planning process adequately addresses areas where capital improvements, which will improve reliability, are needed. Adoption of IEEE 1366 Standards for determining excludable weather events would give a more accurate representation of individual circuit reliability.

Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

Please refer to Attachment A: Problem Circuit Remediation Index (PCRI).

- (a) Would this proposed penalty measure improve the performance of problem circuits?
- (b) What improvements could be made to the proposed program to enhance it?
- (c) Is there an alternative method of improving performance of poorly performing circuits?
- (d) The Department has allocated 45 percent of the potential penalty pool to SAIDI and SAIFI in Docket 99-84. If the Department was to approve the PCRI program, what percentage of the potential penalty pool should be allocated to PCRI?

Response:

a) WMECO has evaluated the proposed penalty measure based on Problem Circuit Remediation Index (PCRI) and does not believe this penalty measure would improve the performance of problem circuits, and does not recommend its adoption as a service quality measure. The following information is provided to show some insight into WMECO's belief that this should not be a penalty measure.

The metric PCRI is based on the following calculation:

$$PCRI = \frac{SAIFI \times SAIDI}{Customers Served} = \frac{Customer Minutes \times Customers Affected}{(Customers Served)^3}$$

This factor produces a number that is heavily weighted by the number of customers served. The larger the circuit customer counts the more likelihood of producing smaller PCRI numbers. However, for circuits with small customer counts, there is a great likelihood of producing larger numbers, greater than zero, thus dramatically affecting the standard deviation.

This can be evidenced from the graphs in Appendix A that show several small circuits with low customer counts that produced dramatically large PCRI numbers, on the right end of the distribution, resulting in a significant standard deviation of over 20. This can be evidenced for 2003 where these circuits with small customer counts produced significant PCRI numbers. This was also the case in previous years evaluated. In 2004, a good weather year, none of the small circuits had events on them that lead to large PCRI measures, but from the frequency distribution below for 2004 for circuit SAIDI, you can see that the SAIDI values as a whole were generally lower than the 2 previous years. Under the proposed penalty mechanism, 2002 and 2003 would not have resulted in penalty, but 2004, a better performing year, WMECO would be subject to the penalty.

Based on the following analysis, the PCRI is not a valid metric to be used to identify problem circuits and WMECO would not support the use of this metric for determining penalties. WMECO would also not support using this metric in ranking circuits. The metric would tend to push for reliability work on the smaller circuits. This would result in reliability expenditures to benefit a small group of customers.

To demonstrate this, for 2004, circuits were ranked by SAIDI and then the PCRI calculated. The worst top ten from each category were compared and when you look at the worst ranking for circuits the PCRI clearly favored circuits with small customer counts. See the table below for the results of the analysis.

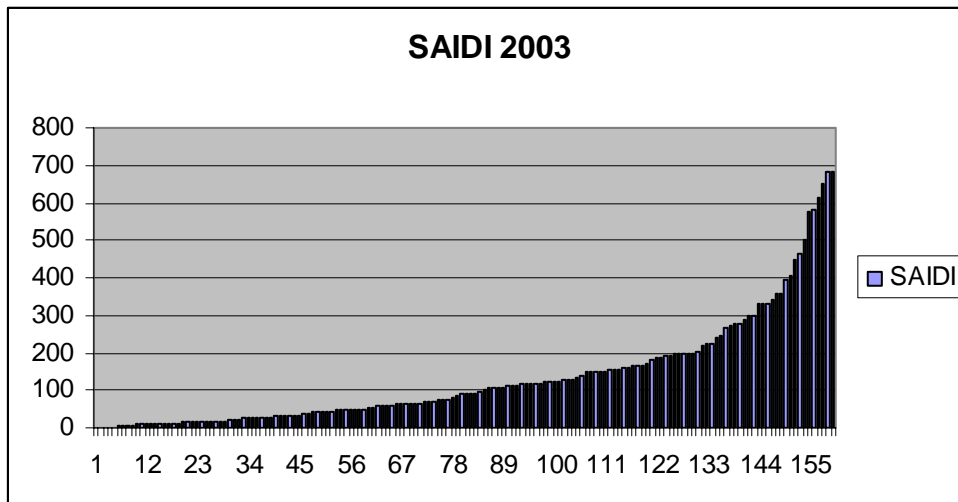
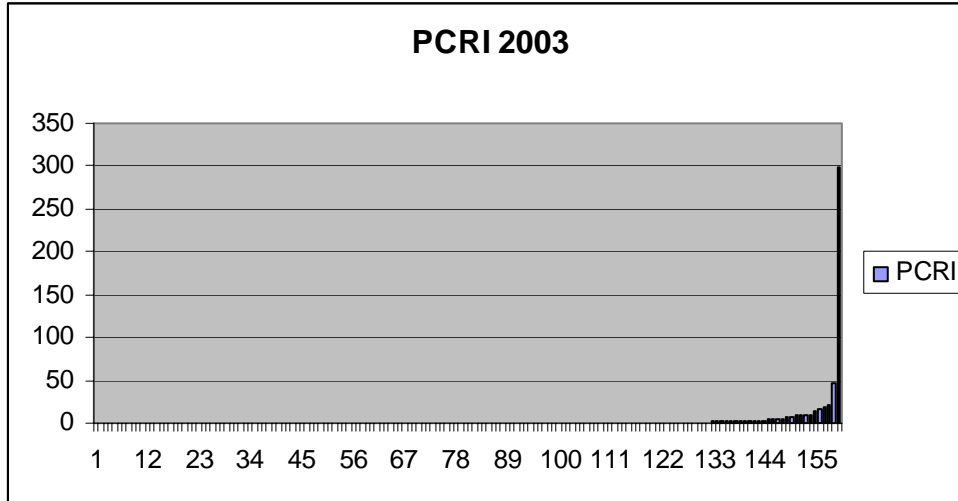
Worst SAIDI Ranking			Worst PCRI Ranking		
Circuit	Year	Cust Served	Circuit	Year	Cust Served
38A1	2004	1782	15E3	2004	16
18K2	2004	2564	19J2	2004	873
18G3	2004	1370	11G1	2004	853
18G7	2004	1875	4G4	2004	918
22B6	2004	500	8C13	2004	114
5C6	2004	127	18G2	2004	19
4G4	2004	918	16C11	2004	38
11G1	2004	853	4G1	2004	100
19J2	2004	873	6S3	2004	378
6S3	2004	378	5C6	2004	127
Total		11240	Total		3436

The following is a comparison of the analysis for the years 2003, and 2004 to determine the WMECO penalties based on the proposed methodology.

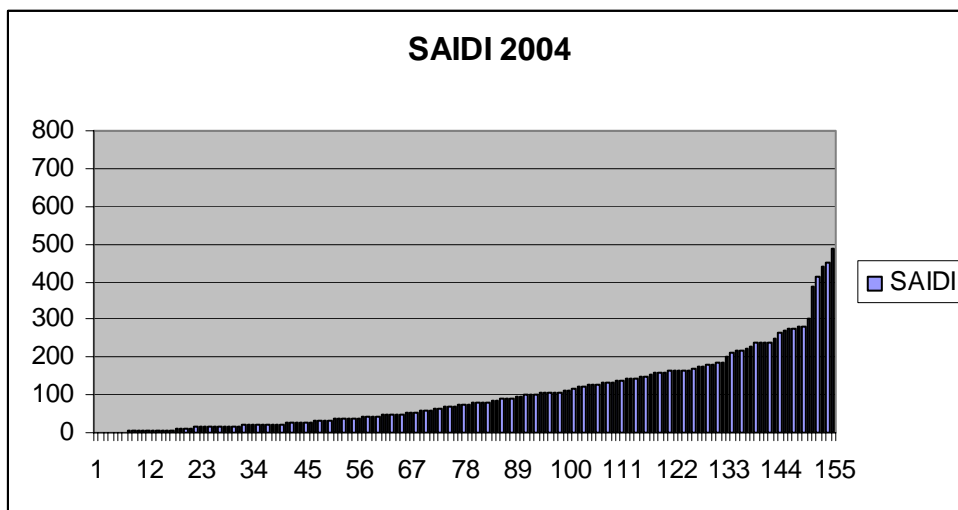
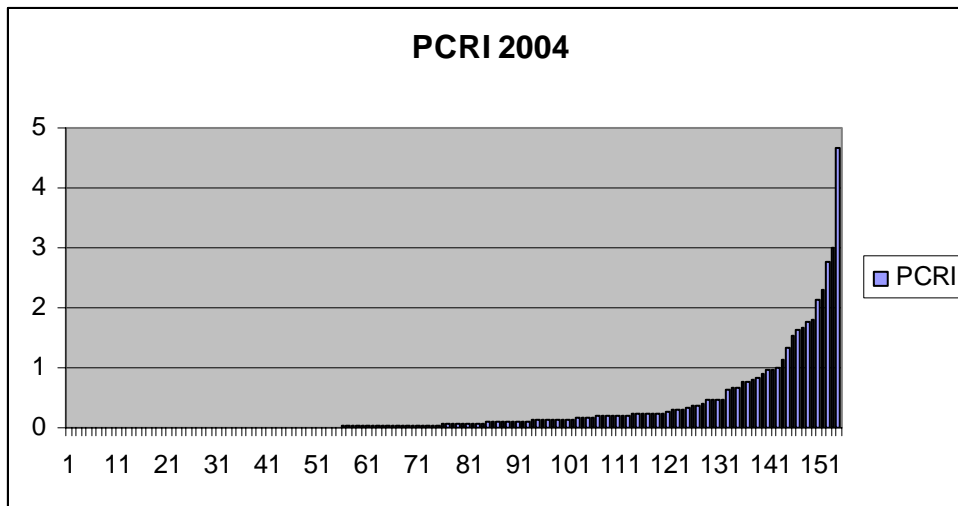
	Year 2004	Year 2003
Average of PCRI- Top 10	3.5997	6.0849
Average of PCRI- all others	0.2981	3.2658
Standard deviation	0.6338	24.0051
Penalty threshold	0.9319	None

Appendix A

WMECO 2003 Frequency Distributions for PCRI and SAIDI



WMECO 2004 Frequency Distributions for PCRI and SAIDI



Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

Please refer to Attachment B: Major Safety Incident Index (MSII).

- (a) Is it feasible for the Department to substitute this new MSI lpenalty measure for its existing Lost Work Time Accident measure for Electric Distribution Companies?
- (b) What improvements could be made to the proposed program?
- (c) If the Department were to approve the MSII penalty measure, what percentage of the potential penalty pool should be allocated to the MSII measure?

Response:

- a) WMECO does not consider it feasible, or advisable, to substitute the Major Safety Incident Index (MSII) penalty measure for the existing Lost Work Time Accident measure currently reported by Electric Distribution Companies. Electric Distribution Companies should continue to utilize OSHA Standards to report the level of safety compliance, and lost work time accidents. While WMECO holds in highest regard the safety of its employees and the general public, it does not feel the adoption of a safety metric such as MSII is warranted, as it does not accurately reflect the safety performance of the Electric Distribution Company and its employees.
- b) As described this measure would penalize the utility for incidents that are not all within the company's ability to influence directly. The human injury element as described should not be included, as it is not something that the company can always prevent and would send improper signals to employees as to when they should seek medical attention, and possibly cause employees to not seek medical attention when it is warranted. In regards to setting penalty benchmarks for such a proposed measure, four quarters do not provide enough data to set penalty benchmarks.
- c) WMECO does not recommend the Department adopt the MSII penalty measure and cannot provide an allocation percentage to the penalty pool.

Witness: Michael T. Smith
Request from: Department of Telecommunications and Energy

Question:

Do the Companies have any alternative penalty measures that would accomplish the goals of PCRI and MSII? Describe.

Attachment A: Problem Circuit Remediation Index (PCRI)

The purpose of this penalty measure is to improve the circuit quality of the worst performing circuits in any electric distribution company's service area.

Definitions

Worst performing circuits are defined as an electric distribution company's ten worst performing circuits within its entire service area, as reported in the Company's annual service quality report to the Department. The service area of a utility is an electric distribution Company's entire service territory.

Calculation of the Index

The Company shall calculate an index of circuit reliability. Circuit reliability will be defined as:

Circuit SAIFI * Circuit SAIDI

Number of Circuit Customers

This index will be calculated for all of an electric distribution company's circuits, including the worst ten circuits as indicated in the Company's last annual SQ Report to the Department. The Company will then compare the mean circuit reliability of the ten worst circuits to the mean circuit reliability of the remaining circuits. If the mean of the worst ten circuits falls more than one standard deviation from the mean of the remaining circuits, the Company will be subject to a monetary penalty.¹

The worst ten circuits for a given year will continue to "age" until the circuit reliability index falls within the one standard deviation deadband. The same set of "worst circuits" for a given year will continue to be subject to penalty until they fall within one standard deviation of the remaining circuits of the company. That is, once chosen as "worst circuits" for that particular year, those designated circuits continue to be monitored until they fall, on average, within one standard deviation of all of the remaining circuits. When they fall within one standard deviation of the mean of the remaining circuits, that group shall be retired. This means, for each year there will be a new group of worst performing circuits. For example, in the second year, an additional group of the ten worst circuits will be selected, in the third year ten more circuits, and so on.²

All penalty calculations will be arrived at utilizing the current penalty formula introduced by the Department in Docket 99-84.

1 Companies will be subject to the penalty except for year 1.

2 No duplicates will appear on the list of any consecutive classes.

Attachment B: Major Safety Incident Index (MSII)

This index is designed to track the major safety problems that may characterize the day-to-day operations of an electric distribution company. Included would be stray voltage incidents, explosions, and other threats to safety.

Definitions

A Major Safety Incident is described as follows:

Any incident, including accidents as defined in G.L. c. 164, § 95, occurring in the conduct of the day-to-day business operations of the utility that leads to: (1) human injury that requires the attention of a physician; (2) injuries to domesticated animals or livestock, or (3) property damage exceeding \$5,000.

Injury to domesticated animals or livestock is defined as a health or bodily effect stemming from an incident or event connected with the operations of the utility that requires the attention of a veterinarian. Property is defined as a possession of any person or entity that suffered damage exceeding \$5,000 from an incident or event in the estimation of the utility company.

Calculation of the Index

The frequency of these incidents are to be tallied and a total arrived at quarterly and then accumulated to arrive at an annual total.

The first year of the gathering and calculation of the index will be for the purpose of developing a four-quarter benchmark for each company. Quarterly data will be integrated into the benchmark following each year of collection and reporting to the Department. Data will be integrated into the benchmark calculation for up to 20 quarters.

After Year 5, each company will be required to compare its annual performance to its mean, accumulated benchmark performance. If a company's performance for any year exceeds one standard deviation from its previous mean performance, the Company will be subject to a monetary penalty. The penalty calculation will be arrived at utilizing the current penalty formula introduced by the Department in D.T.E. 99-84.

Response:

WMECO does not have any alternative penalty measures to offer in lieu of the PCRI and MSII described in Attachments A and B. WMECO believes the current service quality measures appropriately represent the company's service quality.